

REMARKS

The present Amendment is in response to the Examiner's Office Action (hereinafter referred to as "the Office Action") mailed November 1, 2007. Claims 1, 3-6, and 8-10 are amended, no claims are cancelled and new claim 14 is added. Claims 1-14 are now pending in view of the above amendments.

Reconsideration of the application is respectfully requested in view of the above amendments to the claims and the following remarks. For the Examiner's convenience and reference, Applicants' remarks are presented in the order in which the corresponding issues were raised in the Office Action.

I. GENERAL CONSIDERATIONS

A. Claim Amendments

With particular reference to the claim amendments, Applicants note that while claims 1, 3-6, and 8-10 have been amended herein, such amendments have been made in the interest of expediting the allowance of this case. Notwithstanding, Applicants may, on further consideration, determine that claims of broader scope than those now presented are supported. Accordingly, Applicants hereby reserve the right to file one or more continuing applications with claims broader in scope than the claims now presented.

Consistent with the points set forth above, Applicants submit that neither the claim amendments set forth herein, nor any other claim amendments, claim cancellations or statements advanced by the Applicants in this or any related case, constitute or should be construed as, an implicit or explicit surrender or disclaimer of claim scope with respect to the cited, or any other, references.

B. Remarks

Applicants respectfully note that the remarks herein do not constitute, nor are they intended to be, an exhaustive enumeration of the patentable distinctions between any cited references and the invention, example embodiments of which are set forth in the claims of this application. Rather, and in consideration of the fact that various factors make it impractical to enumerate all the patentable distinctions between the invention and the cited art, as well as the fact that the Applicants have broad discretion in terms of the identification and consideration of the base(s) upon which the claims distinguish over the cited references, the distinctions identified

and discussed herein are presented solely by way of example. Consistent with the foregoing, the discussion herein is not intended, and should not be construed, to prejudice or foreclose contemporaneous or future consideration by the Applicants, in this case or any other, of: additional or alternative distinctions between the invention and the cited references; and/or, the merits of additional or alternative arguments.

Applicants note as well that the remarks, or a lack of remarks, set forth herein are not intended to constitute, and should not be construed as, an acquiescence, on the part of the Applicants: as to the purported teachings or prior art status of the cited references; as to the characterization of the cited references advanced by the Examiner; or as to any other assertions, allegations or characterizations made by the Examiner at any time in this case. Applicants reserve the right to challenge the purported teachings and purported prior art status of the cited references at any appropriate time.

II. Allowed Subject Matter

The Examiner's allowance of claims 11-13 is appreciated. Applicants wish to thank the Examiner for the careful review and allowance of those claims.

The Applicants submit the following comments concerning the Examiner's statements of reasons for the indication of allowable subject matter in the Office Action. Applicants agree with the Examiner that the claimed invention of claims 11-13 is patentable over the prior art, but respectfully disagrees with the Examiners statement of reasons for allowance as set forth in Office Action. Applicants submit that it is the claim as a whole, rather than any particular limitation, that makes each of the claims allowable. No single limitation should be construed as the reason for allowance of a claim because it is each of the elements of the claim that makes it allowable. Therefore, Applicants do not concede that the reasons for allowable subject matter given by the Examiner are the only reasons that make, or would make, the claims allowable and do not make any admission or concession concerning the Examiner's statement in the Office Action.

III. Rejection Under 35 U.S.C. § 103

The Examiner rejects claims 1-10 under 35 U.S.C. § 103 as being unpatentable over *Lam et al.* (U.S. Pub. No. 2003/0147574 A1). Applicants respectfully note at the outset that in order to establish a *prima facie* case of obviousness, it is the burden of the Office Action to demonstrate that the prior art reference (or references when combined) must teach or suggest all the claim limitations. *MPEP* § 2143.

As noted above, Applicants have amended independent claim 1 to recite "An optical modulator, divided into at least two active segments separated by at least one passive segment, the modulator comprising: an optical waveguide with an optical group index (n_o) having an optical signal propagating at an optical velocity (v_o), and a microwave transmission line with an electrical propagation index (n_p), having an electrical signal propagating at an electrical velocity (V_e), wherein the electrical propagation index (n_p) of the unloaded microwave transmission line is lower than the optical group index (n_o) of the optical waveguide, characterized in that the loading and length of the microwave transmission line are adjusted for a specific Bloch impedance and electrical velocity (v_e), wherein the microwave transmission line is longer than the optical waveguide. (Emphasis added). A similar amendment has been made to independent claim 6. Support for such amendments is found at least in Figures 5a-5f and page 10, lines 11-15 of the originally filed specification.

In sharp contrast, *Lam* does not teach or disclose that the microwave transmission line is longer than the optical waveguide. For example, Figure 1A and especially Figure 1B appear to show that optical waveguide 10 is longer than transmission line 15. In addition, at best *Lam* teaches that the length of the transmission line can be varied independently of the length of the optical waveguide (paragraph 0014). However, this is not the same as requiring that the transmission line be longer than the optical waveguide.

Accordingly, the Office Action has failed to show that *Lam* teaches or suggests all of the limitations of amended claims 1 and 6 and therefore a *prima facie* case of obviousness has not been established for these claims. Applicants respectfully request that the obviousness rejection for these claims, as well as dependent claims 2-5 and 7-10, be withdrawn.

IV. **New Claim**

As shown above, Applicants have added new dependent claim 14. Support for this claim is found at least at page 11, line 19-21 of the originally filed specification. Applicants submit that this claim is allowable over the cited art for at least the reason that the cited art does not teach or suggest each and every limitation of amended claim 1.

CONCLUSION

In view of the foregoing, Applicants believe that they have addressed every issue raised in the Office Action and has put the claims in allowable form. In the event that the Examiner finds remaining impediment to a prompt allowance of this application that may be clarified through a telephone interview, or which may be overcome by an Examiner's Amendment, the Examiner is requested to contact the undersigned attorney.

Dated this 25th day of February, 2008.

Respectfully submitted,

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